

Amendments to the Claims

1 (original). A method of making a shaped part having an integrated energy-absorbing component, comprising (a) positioning a previously-formed thermoplastic energy-absorbing component into a mold; (b) introducing a molten thermoplastic substrate polymer into the mold, and (c) molding the substrate polymer in the mold under conditions sufficient to form said substrate polymer into a shaped substrate and to adhere the energy-absorbing component to said substrate while substantially retaining the structure of the energy-absorbing component.

2 (original). The method of claim 1 wherein the energy-absorbing component is an extruded polyolefin foam.

3 (original). The method of claim 1, wherein the substrate polymer is of the same material as the energy-absorbing component or of a polymer that is classified the same as the energy-absorbing component for recycling purposes.

4 (original). The method of claim 2, wherein the extruded polyolefin foam has a density of less than 20 pounds per cubic foot (320 kg/m³).

5 (currently amended). The method of ~~any of claims 2 or~~ claim 4, wherein the extruded polyolefin foam has a density of 0.5 to 10 pounds per cubic foot (80 to 160 kg/m³).

6 (currently amended). The method of ~~any of claims 2 or~~ claim 4, wherein the extruded polyolefin foam is anisotropic.

7 (currently amended). The method of claim 2 ~~any of claims 2-6~~, wherein the extruded polyolefin foam has a compressive strength in at least one direction of no greater than 150 psi (1034 kPa) at 25% strain as measured in accordance with ASTM D3575-93 (Suffix D).

8 (original). The method of claim 6, wherein the extruded polyolefin foam exhibits a compressive strength in one direction that is at least 1.25 times the compressive strength in

one or more other directions.

9 (original). ~~The method of claim 1, wherein the energy-absorbing component is a coalesced strand foam.~~

10 (currently amended). The method of claim 1 ~~any of claims 1-9~~, further comprising the step of inserting a flexible sheet into the mold in contact with at least one interior surface thereof prior to the introduction of the molten thermoplastic polymer, and introducing the molten substrate polymer such that it comes in contact with the flexible sheet and upon solidifying becomes adhered to the flexible sheet.

11 (original). The method of claim 2, wherein the thickness of the previously-formed thermoplastic foam after the molding step is at least 5 millimeters.

12 (original). The method of claim 11, wherein the thickness of the previously-formed thermoplastic foam after the molding step is from about 5 to about 200 millimeters.

13 (original). The method of claim 2, wherein the previously-formed thermoplastic foam is a TPO or polypropylene, and the substrate polymer is a TPO or polypropylene.

14 (original). The method of claim 13, wherein the flexible sheet is a TPO or polypropylene.

15 (original). The method of claim 1, wherein the energy-absorbing component is an expanded polystyrene, a styrene/phenylene oxide copolymer or other polystyrene copolymer bead foam.

16 (original). The method of claim 1, wherein the energy-absorbing component is a modular energy-absorbing assembly including a base having a plurality of recesses that each include a floor and walls, wherein the recesses include an opening at the base, and an overlay is adhered to the base, the floor or both to form a plurality of gas-filled enclosed spaces.

17 (original). A shaped composite having a thermoplastic foam component having a density of less than 10 pounds per cubic foot (160 kg/m³) and a thickness of at least 5 millimeters

directly adhered, without intervening adhesive, to a thermoplastic substrate having a density of at least 20 pounds per cubic foot (320 kg/m^3) and a thickness of at least 1.5 ~~millimeters~~.

18 (original). The shaped composite of claim 17 wherein the substrate is of the same material as the thermoplastic foam component or a polymer that is classified the same as the thermoplastic foam component for recycling purposes.

19 (currently amended). The shaped component of claim ~~17~~ 18, which is an energy-absorbing vehicle part.

20 (original). A shaped composite having a thermoplastic modular energy-absorbing assembly including a base having a plurality of recesses that each include a floor and walls, wherein the recesses include an opening at the base, and an overlay is adhered to the base, covering the opening of each recess to form a plurality of gas-filled enclosed spaces, the energy-absorbing assembly being directly adhered, without intervening adhesive, to a thermoplastic substrate having a density of at least 20 pounds per cubic foot (320 kg/m^3) and a thickness of at least 1.5 millimeters.

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